

# EUROPEAN PATENT OFFICE

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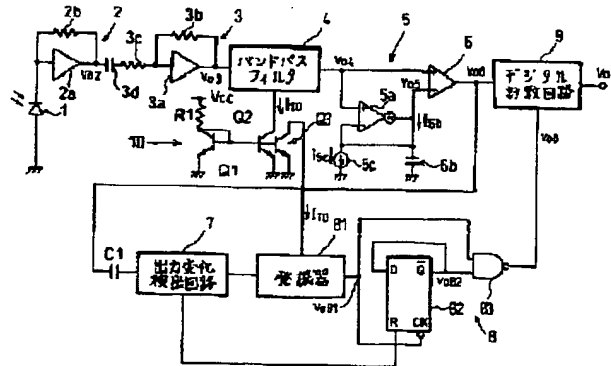
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TITLE : OPTICAL SIGNAL DEMODULATOR



ABSTRACT : PROBLEM TO BE SOLVED: To realize an optical signal demodulator in which malfunction is hardly caused and the pulse width of a received code signal is accurately demodulated.

SOLUTION: A photodiode 1 receives an optical code signal modulated by a pulse with a prescribed frequency. The received signal is given to a band pass filter 4, in which only a prescribed frequency component is discriminated and the resulting signal is converted into a pulse signal  $V_{06}$  by an integration circuit 5 and a comparator 6. An output change detection circuit 7 detects a rising of the pulse signal  $V_{06}$  and it is informed to a clock generating section 8. The clock generating section 8 generates a clock signal  $V_{08}$  synchronized with the pulse signal  $V_{06}$ . A digital counter circuit 9 is operated by using the clock signal  $V_{08}$  to count the number of the pulse signals  $V_{06}$  synchronized with the clock signal  $V_{08}$ . The digital counter circuit 9 demodulates the code signal based on the pulse signal  $V_{06}$  when the number of pulses exceeds the prescribed number.

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